



WASHINGTON STATE DEPARTMENT OF ECOLOGY
EASTERN REGIONAL OFFICE
4601 NORTH MONROE
SPOKANE, WASHINGTON 99205-1295

FINAL STATEMENT OF BASIS
FOR
AIR OPERATING PERMIT NUMBER 02AQER-5062
GUY BENNETT LUMBER COMPANY
CLARKSTON LUMBER MILL
CLARKSTON, WASHINGTON

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LIST OF ABBREVIATIONS

| | |
|-----------------|---|
| AOP | Air Operating Permit |
| BACT | Best Available Control Technology |
| BTU | British Thermal Units |
| °C | Degrees Celsius |
| CAM | Compliance Assurance Monitoring |
| CFR | Code of Federal Regulations |
| CO | Carbon Monoxide |
| COMS | Continuous Opacity Monitoring System |
| dscf | Dry Standard Cubic Foot |
| dscf/m | Dry Standard Cubic Foot per minute |
| Ecology | Washington State Department of Ecology |
| E.I.T. | Engineer in Training |
| EPA | United States Environmental Protection Agency |
| °F | Degrees Fahrenheit |
| FCAA | Federal Clean Air Act |
| ft ³ | Cubic foot |
| gr/dscf | Grains per dry standard cubic foot |
| hr | Hour |
| lb | Pound |
| MMBtu | Million British Thermal Units |
| MRRR | Monitoring, Recordkeeping, and Reporting Requirement |
| NOC | Notice of Construction |
| NO _x | Oxides of Nitrogen |
| NSPS | New Source Performance Standard |
| O ₂ | Oxygen |
| O&M | Operation & Maintenance |
| P.E. | Professional Engineer |
| PM | Particulate Matter |
| PM-10 | Particulate Matter with aerodynamic diameter ≤ 10 micrometers |
| ppm | Parts per million |
| PSD | Prevention of Significant Deterioration |
| RACT | Reasonably Available Control Technology |
| RCW | Revised Code of Washington |
| RM | EPA Reference Method from 40 CFR Part 60, Appendix A |
| scfm | Standard Cubic Feet per Minute |
| SIP | State Implementation Plan |
| SO ₂ | Sulfur Dioxide |
| T | Temperature |
| TAP | Toxic Air Pollutant |
| TPD | Tons Per Day |
| TPY | Tons Per Year |
| TSP | Total Suspended Particulate |
| VOC | Volatile Organic Compound |
| WAC | Washington Administrative Code |
| w% | Percentage by Weight |
| yr | Year |

Selected Emission Units – Annual Potential To Emit in Tons Per Year (tpy)¹

| Emission Units | PM-10 (tpy) | CO (tpy) | NO _x (tpy) | SO ₂ (tpy) | VOC (tpy) |
|---------------------|-------------|----------|-----------------------|-----------------------|-----------|
| Hogged Fuel Boiler | 10.5 | 249 | 30 | 1.6 | 20 |
| | >100* | | | | |
| Lumber Drying Kilns | 5 | - | - | - | 53 |
| Planer Cyclone | 8.8 | - | - | - | - |

* Indicates pre-controlled emissions from sources to which Compliance Assurance Monitoring is applicable.

1.0 Introduction

This document sets forth the legal and factual basis for the permit conditions in a FINAL AOP issued by the State of Washington Department of Ecology for a lumber mill located at the Port of Wilma near Clarkston, Washington. This document is called a “statement of basis” and is required by Washington State regulations [chapter 173-401 WAC]. A statement of basis does not contain enforceable permit conditions. Enforceable permit conditions are contained in the AOP itself.

2.0 Facility Identifying Information

- 2.1 Company Name -----Guy Bennett Lumber Company
- 2.2 Facility Name -----Clarkston Lumber Mill
- 2.3 Unified Business Identification Number----- 022-001-780
- 2.4 Facility Address ----- 1952 Wilma Drive, Clarkston Washington 99403
- 2.5 Responsible Official ----- Janice Dimke
- Mailing Address ----- P.O. Box 670, Clarkston Washington 99403
- 2.6 Facility Contact----- Mark Speer, Plant Superintendent
- 2.7 Facility Contact Phone Number----- (509) 758-5558

3.0 Basis for Title V Applicability

Guy Bennett Lumber Company, Clarkston Lumber Mill, is subject to Title V, Air Operating Permit Regulations, due to the emissions of carbon monoxide (CO) in excess of 100 tons per year. WAC 173-401-200(17)(b) identifies any source that directly emits or has the potential to emit one hundred tpy or more of any air pollutant as a major source. Major sources are required to obtain Title V permits under 173-401-300(1)(a)(i).

4.0 Attainment Classification

The facility is located in an area that is classified as attainment for all criteria pollutants as of May 2002.

5.0 Title V Facility Timeline

- 5.1 December 9, 1994----- Source Initial Notification of Inclusion in Title V AOP Program
- 5.2 May 3, 1995 -----Source Determined to Not be subject to Title V AOP Program

¹ Annual potential to emit values as submitted by the permittee as part of the AOP application.

- 5.3 January 25, 1999 ----- Source Notification of Applicability of Title V AOP Program
- 5.4 October 4, 1999----- Title V AOP Application materials received by Ecology
- 5.5 September 5, 2002 ----- Draft Permit Issued
- 5.6 September 10, 2002 -----Public Comment Period Begins
- 5.7 October 9, 2002----- Public Comment Period Ends
- 5.8 October 17, 2002 ----- EPA Review Period Begins
- 5.9 November 30, 2002 -----EPA Review Period Ends
- 5.10 November 27, 2002 ----- Final Permit Issued (Order No. 02AQER-5062)
- 5.11 January 1, 2003 ----- Order No. 02AQER-5062 Effective Date
- 5.12 January 1, 2008 -----Order No. 02AQER-5062 Expiration Date

6.0 Facility Description

- 6.1 The facility includes process areas for lumber manufacturing, a log yard, maintenance facilities, offices, and fuel storage. The mill processes raw logs into dried finished lumber. Wood residue from the de-barker and sawmill is used onsite as fuel. The site contains facilities for repair and maintenance process equipment as well as mobile and other miscellaneous equipment and vehicles used in mill operations.
 - 6.1.1 *General Facility Process Description* – Bennett produces lumber for sale. Lumber production is described below by following the raw materials (logs and green lumber) as they flow through the facility to the end product. Logs are brought onsite by truck. The logs are unloaded, and sorted by species and size. The sorted logs are stacked in the log yard on the west edge of the property for temporary storage. As needed, they are transferred to the log deck in preparation to be fed to the de-barkers in the saw mill. In the saw mill, logs are cut to dimension size. From the saw mill, the lumber is sent to the dry kilns. In the dry kilns, the lumber is dried to commercial moisture content. After drying, the lumber is planed to commercial dimensions, stacked, and packaged for shipment. Bark from the logs is conveyed to the fuel hog¹ and then to the fuel house for temporary storage. The hogged fuel is fed either to the boiler by a conveyor system as needed or to trucks for shipment as a product of the mill.
 - 6.1.2 *Sawmill* – The saw mill and de-barker are located on the west side of the property. Logs are delivered to the in-feed of either of two de-barkers by a front loader. The de-barkers consist of hydraulic log handlers and mechanical conveyors that feed the logs to the de-barking machinery. The bark drops to a conveyor leading to a fuel hog. The fuel hog grinds up the bark before it is conveyed to the fuel house for storage. After the logs are de-barked, they are conveyed to bandsaws, edgers, a re-saw, and a trim saw to produce rough-cut dimension lumber. Any green scrap wood cut from the logs is conveyed to a chipper. The chipper reduces the green scrap wood to a uniform chip size. The chips are pneumatically conveyed to a chip screen to separate out sawdust. The clean chips are pneumatically conveyed and sawdust is mechanically conveyed to separate truck bins for temporary storage until shipped out as products of the mill. The rough-cut green lumber is conveyed to the sorting and stacking section of the sawmill building. At that point, the lumber is stacked in bundles with stickers (small sticks of lumber). The stickers separate each layer of lumber to allow air flow

¹ A hammermill that breaks down the size of the pieces of bark to improve the efficiency of combustion.

and uniform drying. The bundles of green lumber are transferred either to temporary storage on the north edge of the mill or directly to the kilns for drying.

- 6.1.3** *Lumber Drying* – The five dry kilns are located on the north-center and northeast sections of the facility. They use steam heated air to dry green lumber. The steam, provided by the boilers, passes through heating coils inside the kilns. Blowers pull cool dry air into the kilns and past the heating coils. The heating coils raise the air temperature in the kilns to approximately 150-200°F. The blowers circulate the warm air through the lumber. The resulting warm moist air is vented to the atmosphere. The dry rough-cut lumber is conveyed by fork lift trucks to dry storage buildings located in the south-central section of the facility. The primary emissions from the dry kilns are volatile organic compounds (VOC) released from the wood by the heat of the drying process. They consist mainly of members of the terpene family. Bennett has been limited to not more than 53 tons per year of VOC emissions. Over time, Bennett expects to process any one or more of several different species of woods, including pines, firs, and spruces. Each of these species has a characteristic concentration of VOC's, and as a consequence, the quantity of VOC's emitted from the dry kilns will vary with the wood specie being processed.
- 6.1.4** *Planer Mill* – The planing mill is located on the east side of the facility. The dry rough-cut limber is transferred from the storage buildings to the planer in-feed that feeds the un-stacker. An employee inspects the lumber as it is un-stacked. Any lumber that is split, damaged, or too moist, is separated for transport to the fuel hog or re-dry in the dry kilns. The good lumber is automatically aligned and runs through the planer. The planer shaves off a thin layer from the surface leaving a smooth edge and bringing to lumber to the desired commercial dimension. The planed lumber is then cut to desired lengths by the trim saw. The material shaved off is commonly referred to as "planer shavings." The planer shavings are collected by suction vents and pneumatically conveyed to the shavings bins. The pneumatic conveyance system is controlled by a cyclone. Trimming cuts small pieces from the ends of the lumber. The end pieces of lumber are conveyed to a chipper, and then pneumatically conveyed to the dry chip bin. The planer shavings and trim saw chips are sold as products of the mill. The finished lumber is transferred from the planing mill to the storage and shipping area on the east and southeast sides of the facility where it is packaged and stored for shipping by truck or rail. The primary emissions from the planing mill are fugitive particulate matter as well as the emissions from the planer shavings cyclone.
- 6.1.5** *Wood Waste Conveyance Systems* – These include the mechanical and pneumatic conveying systems. The mechanical conveyors (belt conveyors) are used to move and store logs, lumber, sawdust, and bark. The pneumatic conveyors are used to transport wood chips and shavings to various storage bins. Chips, sawdust, bark (mechanical conveyance) and planer shavings (pneumatic conveyance) are conveyed from their generation points to a truck bin, a rail car loadout, or the fuel house. The primary emissions from the conveying systems are particulate matter. The mechanical conveyors are subject to specific Ecology order conditions of approval. Sawdust must be conveyed only by mechanical conveyors. Hog fuel from the sawmill must use only covered conveyors. Storage bins must have no visible emissions, must control fugitive emissions, and have restrictions on the particulate matter emissions concentration.

- 6.1.6** *Hogged Fuel Boiler* – The boiler consists of one spreader stoker Kipper boiler rated at 40,000 pounds of steam per hour. The boiler burns hog fuel and provides steam to the dry kilns. The primary emissions from the boiler consist of particulate and products of combustion (nitrogen oxides, carbon monoxide, and volatile organic compounds). Of these, the particulate matter and carbon monoxide are the most significant. The particulate matter emissions from are controlled by an electrostatic precipitator. Carbon monoxide emissions are limited by good boiler maintenance and combustion practices. The boiler is subject to specific regulations and approval conditions in an Ecology order. Particulate and carbon monoxide emissions and the maximum steam generation rate are limited as is the particulate matter emissions concentration.
- 6.1.7** *Maintenance* – Some of the maintenance activities taking place at the Clarkston lumber facility include an automotive maintenance shop including a diesel dispensing tank and facility maintenance - groundskeeping, carpentry, painting, etc.
- 6.1.8** *Miscellaneous* – Miscellaneous sources at the facility encompass a range of units (i.e., a log yard and facility roads) and activities (i.e., fuel storage and finished lumber storage and shipping).

7.0 Facility Emission Units/Processes

7.1 Facility Wide (Section 2.1 in AOP)

- 7.1.1** Point source emission units and/or processes specifically subject to the requirements in Section 2.1 of the AOP include the following:

7.1.1.1 Cyclone – Planer shavings cyclone

7.2 Hogged Fuel Boiler (Section 2.2 in AOP)

7.3 Lumber Drying Kilns #1 through #5 (Section 2.3 in AOP)

7.4 Lumber Drying Kiln #6 (Section 2.4 in AOP)

7.5 Chip and Sawdust Conveyance, Storage, and Transport System (Section 2.5 in AOP)

8.0 Insignificant Emission Units and Activities

- 8.1** The permittee proposed numerous insignificant emission units as categorically insignificant based on the requirements outlined in WAC 173-401-532. A list of these units is on file with the Department of Ecology's Eastern Region Office, Air Quality Program in Spokane, Washington.

9.0 Comments and Corresponding Responses

- 9.1** Comments received during the public comment period and EPA review period are on file at Ecology's Eastern Region Office in Spokane, along with Ecology's response to the comments.

10.0 Applicable and Inapplicable Requirements Determinations/Explanations

- 10.1** Initial or one-time NOC requirements that have not been included in the AOP as ongoing applicable requirements.

- 10.1.1** Order No. DE 88AQ-E172 Second Amendment, Approval Condition 10.2, Within six (6) months of the issuance of the amendment to the Order, the permittee shall conduct or have conducted, a source test for carbon monoxide emissions on the hogged fuel boiler.

- 10.1.1.1** This testing occurred on September 14, 2001. The test report was received by Ecology on October 29, 2001 and is located in the facility source testing file at Ecology's Eastern Regional Office in Spokane, Washington.
- 10.1.2** Order No. DE 88-E172 First Amendment, Approval Condition 4, An O&M manual for the ESP shall be submitted to Ecology for approval within one hundred eighty (180) days of issuance of this amendment.
 - 10.1.2.1** The O&M manual is located in the facility O&M and Processing Info file at Ecology's Eastern Regional Office in Spokane, Washington. While there is no date stamp on the manual, there is a hand-written note on the Order indicating that the manual had been received on June 28, 1993.
- 10.1.3** Order No. DE 88-E172 First Amendment, Approval Condition 8, Within sixty (60) days of the issuance of the amendment to this Order, the permittee shall submit general information, design specification test results, performance specifications, statements, an appendix, and quality control procedures relating to the Continuous Opacity Monitoring System.
 - 10.1.3.1** No record that this requirement was satisfied was identified within the Air Quality files at Ecology's Eastern Region Office.
- 10.1.4** Order No. DE 88-E172 First Amendment, Approval Condition 9, The soot blowing and grate cleaning schedule for the hogged fuel boiler shall be submitted to Ecology within sixty (60) days of the issuance of this amendment.
 - 10.1.4.1** No record that this requirement was satisfied was identified within the Air Quality files at Ecology's Eastern Region Office.
- 10.1.5** Order No. DE 88-E172, Approval Condition 3, Within sixty (60) days following the break-in period for the hogged fuel boiler, a source test shall be conducted to verify compliance with the particulate matter emission rate.
 - 10.1.5.1** The initial source testing occurred on December 29, 1988 and is documented in correspondence from Kris Hansen of Am-Test to Eugene Kasper of Guy Bennett Lumber. The correspondence is located in the facility general file at the Department of Ecology's Eastern Regional Office in Spokane Washington.
- 10.1.6** Order No. DE 88-E172, Approval Condition 4, Within ninety (90) days following the issuance of the Order, the permittee shall submit an O&M plan covering the boiler, multiclone and other instrumentation related to the hogged fuel boiler.
 - 10.1.6.1** While correspondence specifying the exact date that the manual was received could not be located, a letter from Mike Hibbler of Ecology addressed to Eugene Kasper of Guy Bennett Lumber Company documents Ecology's receipt of the plan and outlines several deficiencies of the plan. The O&M plan is located in the facility O&M and Processing Info file at Ecology's Eastern Regional Office in Spokane, Washington.
- 10.1.7** Order No. DE 88-E172, Approval Condition 5, All instrumentation as described in the original BACT analysis shall be installed on the hogged fuel boiler before initial start-up.
 - 10.1.7.1** No correspondence directly relating to this requirement was located. However, the Order did not contain any reporting requirement related to this,

and no information was located that indicates that any of the equipment described in the BACT analysis was not installed prior to start-up.

- 10.1.8** Order No. DE 88-E172, Approval Condition 6, The existing boiler at the Clarkston facility will be shut down permanently as soon as possible, but in no case later than May 30, 1989.
- 10.1.8.1** No correspondence citing the exact date that the old boiler was shut down, however, no information was located that indicated that the boiler shut down did not occur in accordance with the condition.
- 10.1.9** Order No. DE 98AQ-E100, Approval Condition 8.3, The Order shall become void if construction of the new dry kiln is not commenced or is discontinued for a period of eighteen (18) months.
- 10.1.9.1** No record documenting the date that construction commenced on the new dry kiln was identified within the Air Quality files at Ecology's Eastern Region Office.
- 10.1.10** Order No. DE 98AQ-E100, Approval Condition 5.1, The permittee shall provide written notification to Ecology of the date construction of the new dry kiln commenced, postmarked no later than thirty (30) calendar days after such date.
- 10.1.10.1** No record that this requirement was satisfied was identified within the Air Quality files at Ecology's Eastern Region Office.
- 10.1.11** Order No. DE 98AQ-E100, Approval Condition 5.2, The permittee shall provide written notification to Ecology of the actual date of initial startup of the new dry kiln, postmarked within fifteen (15) calendar days after such date.
- 10.1.11.1** No record that this requirement was satisfied was identified within the Air Quality files at Ecology's Eastern Region Office.
- 10.1.12** Order No. DE 98AQ-E100, Approval Condition 5.6, The permittee shall provide written notification to Ecology of completion of the O&M manual within ninety (90) days of initial startup of the new dry kiln.
- 10.1.12.1** No record that this requirement was satisfied was identified within the Air Quality files at Ecology's Eastern Region Office.
- 10.1.13** Order No. DE 92AQ-E112, Approval Condition 2, A fugitive dust control plan shall be submitted for review (and subsequent approval) by Ecology no later than ninety (90) days following issuance of this Order.
- 10.1.13.1** No record that this requirement was satisfied was identified within the Air Quality files at Ecology's Eastern Region Office.
- 10.1.14** Order No. DE 92AQ-E112, Approval Condition 5, Site specific operations and maintenance manuals for all equipment that has the potential to affect emissions to the atmosphere shall be developed no later than sixty (60) days following issuance of this Order and a copy sent to Ecology for approval.
- 10.1.14.1** No record that this requirement was satisfied was identified within the Air Quality files at Ecology's Eastern Region Office.
- 10.1.15** Order No. DE 92AQ-E112, Approval Condition 6, Initial performance testing shall be conducted on the chip and sawdust conveyance, transport, and storage system within

sixty (60) days of issuance of the Order. The initial testing shall be performed by Ecology during the initial permit compliance inspection.

10.1.15.1 No specific record of this initial RM 9 testing could be located within the Air Quality files at Ecology's Eastern Region Office. It is assumed that since the initial compliance inspection did take place (on July 13, 1993 as referenced in correspondence dated July 15, 1993), the record of the RM 9 testing simply got misplaced.

10.2 The following NOC requirements clarified miscellaneous issues with regard to the applicable emission unit and were not, in actuality, approval conditions that require any action on the part of the permittee. These NOC requirements therefore have not been included in the AOP as ongoing applicable requirements.

10.2.1 Order No. DE 88-E172 Second Amendment – Approval Conditions 1.6 and 10.3.3.3, Steam generation rates in excess of limits.

10.2.1.1 These approval conditions stated that any continuous hour during which the steam generation rate exceeded that determined in MRRR **16M** of the AOP shall be considered a violation of the CO and PM-10 emission limits.

10.2.2 Order No. DE 98AQ-E100 First Amendment – Approval Condition 1.1, Lumber drying kiln throughput limit.

10.2.2.1 This approval condition simply states that the dry kiln annual throughput limitation that was imposed by the original Order is no longer in effect.

10.2.3 Order No. DE 92AQ-E112 Second Amendment – Approval Condition 1.1, Chip bin vent particulate matter emission limit and hours of operation limitation.

10.2.3.1 This approval condition simply states that the limitations imposed by the original Order are no longer in effect.

10.2.4 Order No. DE 92AQ-E112 Second Amendment – Approval Condition 3.1, Lumber production limit.

10.2.4.1 This approval condition simply states that the limitation imposed by the original Order is no longer in effect.

10.2.5 Order No. DE 92AQ-E112 First Amendment – Section 3.1 BACT, Sawdust will be conveyed mechanically, wood chips will be conveyed pneumatically.

10.2.5.1 This section of the permit simply clarifies the methods that will be used to convey each particular wood product.

10.2.6 Order No. DE 92AQ-E112 First Amendment – Section 3.1 BACT, Hogged fuel will be conveyed via an enclosed belt conveyor from the sawmill to the hogged fuel storage building.

10.2.6.1 This section of the permit simply clarifies the methods that will be used to convey hogged fuel.

10.3 The following requirements were listed as applicable in the application, but have been determined to be inapplicable by Ecology for the reasons given. These regulations have therefore not been included in the AOP as ongoing applicable requirements.

- | | | |
|----------------|--|--|
| 10.3.1 | WAC 173-400-081 | <u>Allowances for Start-up and Shut-down</u> – This regulation places limitations on Ecology and other permitting authorities, not the source. |
| 10.3.2 | WAC 173-400-091 | <u>Voluntary Emission Limitations</u> – This regulation provides sources of air pollution with the option of voluntarily limiting their emissions. The permittee currently is not subject to any such permit conditions. |
| 10.3.3 | WAC 173-400-100 | <u>Source Registration and Fee Determination</u> – Air Operating Permit sources are not subject to registration and associated fees. |
| 10.3.4 | WAC 173-401-*** | <u>Various Sections of the Operating Permit Regulation</u> – The regulations included in Chapter 173-401 WAC are the guidelines apply to Washington State’s Operating Permit Program and do not include specific requirements that apply to the source. This is can be a source of confusion because Operating Permits include requirements that are authorized by Chapter 173-401 WAC. However, these requirements technically do not apply to the source until they are included in an Operating Permit. |
| 10.3.5 | WAC 173-400-120 | <u>Bubble Rules</u> – This regulation currently does not require any action on the part of the permittee. The permittee is not currently utilizing the bubble rules. |
| 10.3.6 | WAC 173-400-131 | <u>Issuance of Emission Reduction Credits</u> – This regulation currently does not require any action on the part of the permittee. The permittee is not currently utilizing emission reduction credits. |
| 10.3.7 | WAC 173-400-136 | <u>Use of Emission Reduction Credits</u> – This regulation currently does not require any action on the part of the permittee. The permittee is not currently utilizing emission reduction credits. |
| 10.3.8 | WAC 173-400-180 | <u>Variances</u> – This regulation currently does not require any action on the part of the permittee. The permittee is not currently utilizing a variance. |
| 10.3.9 | WAC 173-400-240 | <u>Criminal Penalties</u> – This regulation currently does not require any action on the part of the permittee. |
| 10.3.10 | WAC 173-400-250 | <u>Appeals</u> – This regulation currently does not require any action on the part of the permittee. |
| 10.4 | The following requirements were listed as inapplicable in the AOP application, but have been determined to be applicable to the source at the time of permit issuance by Ecology. These regulations contain requirements that require action on the part of the source in an ongoing manner, and therefore have been included in the AOP as ongoing applicable requirements. | |
| 10.4.1 | WAC 173-400-200 | <u>Creditable Stack Height and Dispersion Techniques</u> – The requirements imposed by this regulation are included in the AOP under Condition 2.1.9. |

10.5 The following requirements were listed as applicable to the source in the AOP application, but have been found to not exist by Ecology. These regulations thus do not contain any requirements that apply to the source and have therefore not been included in the AOP as ongoing applicable requirements.

10.5.1 WAC 173-402-010 “Civil Sanctions” – Chapter 173-402 WAC does not exist.

10.5.2 WAC 173-402-020 “Civil Sanctions” – Chapter 173-402 WAC does not exist.

11.0 Monitoring, Recordkeeping, and Reporting Requirement (MRRR) Sufficiency Explanations – The following section provides brief discussions regarding the reasoning behind the MRRR’s included as part of the AOP. The criterion is that each MRRR must be sufficient to assure compliance with the associated condition, emission standard or work practice.

11.1 MRRR 1M – No specific monitoring can reasonably be required for these requirements. The nature of the requirements makes it necessary to rely on the good faith of the permittee to conscientiously monitor site operations and to promptly report any deviations.

11.2 MRRR 2M – This monitoring is used for conditions that require the source to maintain a certain status quo (e.g., O&M manual accessible to employees in operation of the equipment; maintaining replacement parts for routine repairs to monitoring equipment). To assure compliance with these provisions, the permittee is simply required to check that there has been no change in the status quo. Since such a change is unlikely, an annual inspection was deemed adequate.

11.3 MRRR 3M – This MRRR was designed to provide sufficient response to complaints regarding facility emissions affecting the landowners neighboring or in the affected vicinity of the facility. Timeframes were chosen to provide the permittee with adequate time to respond appropriately as well as ensuring that complaints not go unnoticed.

11.4 MRRR 4M – A monthly visible emission observation is considered to be sufficient monitoring for general process units with regard to the opacity standard. The specifics of the monitoring described have been designed to provide relatively frequent evaluation of each potential emission point, while requiring visible emission testing using EPA RM 9 only when visible emissions are observed and cannot be eliminated within twenty-four (24) hours. The monitoring was designed with the goal of providing the permittee with sufficient opportunity to respond to upsets appropriately while at the same time avoiding significant, prolonged environmental degradation. With regard to the use of visible emission evaluation surveys as a monitoring technique related to particulate matter standards, the method was chosen due to the fact that most of the general process units to which this is applicable are not large enough to justify performance testing using EPA RM’s 5 and/or 202. Visible emission observations provide a convenient alternative method to source testing for the purpose of evaluating the performance of such units.

11.5 MRRR 5M – The monitoring has been designed to require periodic reviews of Operation and Maintenance manuals and other documents in order to evaluate whether current operational practices are being conducted in a manner consistent with the information upon which permitting has been based. The recordkeeping and reporting required ensure that practices which are not consistent with the submitted information will be addressed in a timely manner.

11.6 MRRR 6M – The monitoring has been designed to require periodic walk-around surveys as the most simple and direct method to determine the presence of such emissions. These surveys, in conjunction with a good faith effort on the part of the permittee to operate in accordance with the conditions of the AOP, are considered sufficient monitoring.

- 11.7** **MRRR 7M** – The monitoring as specified has been designed based on the condition that all associated equipment is maintained in proper working condition. Using emission factors in conjunction with operational parameters is a feasible method of estimating emissions from an emission unit for which performance testing may not be feasible. The monitoring was designed with the goal of providing the permittee with sufficient opportunity to respond to upsets appropriately while at the same time avoiding significant environmental degradation.
- 11.8** **MRRR 8M** – This monitoring has been specified to include the estimation of emissions based on the use of emission factors, as described in 11.7 above. In addition, periodic source testing has been added to the monitoring due to the size of the emission unit.
- 11.9** **MRRR 9M** – This monitoring has been specified to rely on periodic source testing in order to gain a reasonable assurance of compliance with the various pollutant limits that apply to the hog fuel boiler. Source testing is the most reliable method for determining emissions, and due to the size of the emission unit, testing is deemed reasonable.
- 11.10** **MRRR 10M** – This monitoring has been specified to apply generally to units subject to Compliance Assurance Monitoring (CAM). The monitoring is included specifically as required by 40 CFR 64.
- 11.11** **MRRR 11M** – A Continuous Opacity Monitor provides real time opacity information. The monitor must be calibrated and maintained in accordance with the quality assurance procedures that have met with Ecology approval in order to ensure that the data produced is valid. Because of its nature, this type of monitoring is sufficient.
- 11.12** **MRRR 12M** – The required response time and information required to be submitted as part of the reporting are in accordance with the permit condition and include the necessary information for Ecology to evaluate the deviation.
- 11.13** **MRRR 13M** – Because the MRRR enables direct comparison between records and the operational limits, it is considered to be sufficient.
- 11.14** **MRRR 14M** – This MRRR establishes the minimum recordkeeping information necessary for reasonable assurance of compliance with the requirement to keep the O&M manual for the hogged fuel boiler updated.
- 11.15** **MRRR 15M** – The monitoring described is specifically applicable to the hogged fuel boiler for the purposes of Compliance Assurance Monitoring (CAM). Compliance Assurance Monitoring must be designed to provide reasonable assurance of compliance with emission limitations or standards for the pollutant specific emission unit. In order for a pollutant specific emission unit (PSEU) to be subject to CAM, the three (3) conditions described below must be met. The manner in which they are met by the hogged fuel boiler is discussed below.
- 11.15.1** The PSEU must be subject to an emission limit for the applicable pollutant. In the case of the hogged fuel boiler, the PSEU is subject to multiple emission limits specific to particulate matter. These applicable requirements are included in Section 2.2 Hogged Fuel Boiler of the AOP.
- 11.15.2** The PSEU must utilize air pollution control equipment to reduce emissions of the applicable pollutant to a level that meets the established emission limit(s). In the case of the hogged fuel boiler, the particulate emissions of the PSEU are controlled by a multiple cyclone and a dry electrostatic precipitator (ESP).
- 11.15.3** The PSEU must have pre-controlled emissions of the specific pollutant that meet or exceed the major source thresholds established in WAC 173-401-200(17). In the case

of the hogged fuel boiler, the pre-controlled emissions of particulate matter have been calculated to be greater than 100 tons per year (tpy). This exceeds the major source threshold of 100 tpy established in WAC 173-401-200(17).

The proposed CAM monitoring has been designed to rely on electrostatic precipitator (ESP) secondary voltage in conjunction with multiclone differential pressure. Through published information and consultation with the ESP manufacturer, secondary voltage was identified as the primary indicator of ESP particulate matter removal efficiency. The particular trigger limits were set based on data obtained during past source tests as well as manufacturer advice and engineering judgment.

- 11.16 MRRR 16M** – The MRRR has been designed to utilize the method outlined in the construction permit to calculate the allowable peak steam generation rate based on the most recent PM-10 and carbon monoxide testing results.
- 11.17 MRRR 17M** – Because the MRRR enables direct comparison between records and the operational limits, it is considered to be sufficient.
- 11.18 MRRR 18M** – This MRRR establishes the minimum recordkeeping information necessary for reasonable assurance of compliance with the requirement to keep the O&M manual for the lumber drying kiln #3 updated.
- 11.19 MRRR 19M** – This monitoring has been designed to ensure that in the event that emission testing is required, that it is conducted in a manner that will provide the necessary data to gain a reasonable assurance of compliance with the applicable limits as well as a reliable quantification of the emissions from the unit.
- 11.20 MRRR 20M** – Because the MRRR enables direct comparison between records and measurements and the operational limits, it is considered to be sufficient.
- 11.21 MRRR 21M** – This MRRR establishes the minimum recordkeeping information necessary for reasonable assurance of compliance with the requirement to keep the O&M manual for the chip and sawdust conveyance, storage, and transport system updated.

12.0 Streamlining Explanations

- 12.1** No applicable requirements underwent streamlining for purposes of this AOP.

13.0 Clarifications and Interpretations

- 13.1 Section 1 - Standard Conditions** – For permit conditions required by Washington State regulations that have been included in the SIP, two dates are given. The first date is the date for the regulation that was adopted into the SIP. The second date is for the most up-to-date version of the regulation. State-only enforceable permit conditions are identified with the symbol (S).
- 13.2 Recordkeeping retention time** – Three of the NOC permits that apply to the permittee (Order No. DE 88AQ-E172 Second Amendment, Order No. DE 88-E172 First Amendment and Order No. DE 92AQ-E112) include conditions which require applicable recordkeeping/reporting to be maintained for a period of less than five years. However, Standard Condition 1.27.3 of the AOP requires that the permittee retain all records or information of this type for a period of at least five (5) years. Due to the fact that the five (5) year requirement included in the standard condition is more stringent, this is the requirement that has been included in the appropriate MRRR's. However, the conditions included in the NOC permits still apply to the permittee and therefore have been included in the AOP under the column labeled Condition, Emission Standard, or Work Practice. The specific NOC conditions that this applies to are listed below.

13.2.1 Order No. DE 88AQ-E172 Second Amendment – Approval Condition(s) 10.3.3.2

13.2.2 Order No. DE 88-E172 First Amendment – Approval Condition(s) 8

13.2.3 Order No. DE 92AQ-E112 – Approval Condition(s) 5

13.3 WAC 173-401-620(1) – Acid Rain Provisions. The permittee is not an affected source as specified in the referenced section of the WAC. Due to this, no permit conditions relating to the acid rain provisions of the FCAA have been included in the AOP.

13.4 WAC 173-401-510(2)(h)(i) – Compliance Plan. At the time of permit issuance, no ongoing applicable requirements have been identified with which the permittee is not currently in compliance. However, this does not preclude Ecology from taking future action on past non-compliance.

13.5 Chapter 173-425 WAC, Open Burning – The requirements restricting open burning in the State of Washington apply to the source, and therefore Chapter 173-425 has been included as an applicable requirement under Section 2.1 Facility Wide Requirements. Additionally, Order No. DE 92AQ-E112 includes a permit condition that prohibits open burning on the facility site.

13.6 Condition 2.1.1 of AOP, Visible Emissions – WAC 173-400-040(1), (1)(a), and (1)(b) restrict visible emissions from all sources of air emissions throughout the source to 20% opacity for no longer than three (3) minutes in any one hour. While it is clear from the time periods contained within the regulation that Ecology Method 9A (“Source Test Manual – Procedures for Compliance Testing”, State of Washington, Department of Ecology, 07/12/90) was the test method intended to be used to verify compliance, this permit has specified EPA Reference Method 9 as the test method utilized as part of MRRR 4M. Ecology has determined that reasonable assurance of compliance with the regulation may be obtained by conducting RM 9 upon observance of visible emissions, as specified within 4M.

13.7 Condition 7.9 of Order 02AQER-4674, previous hogged fuel boiler orders – The condition of the Order states that Order 02AQER-4674 supercedes Order DE88AQ-E172 and its first and second amendments.

13.8 Condition 7.9 of Order 02AQER-4675, previous dry kiln orders – The condition of the Order states that Order 02AQER-4675 supercedes Order DE98AQ-E100 and its first amendment.

13.9 Condition 7.9 of Order 02AQER-4676, previous wood conveyance system orders – The condition of the Order states that Order 02AQER-4676 supercedes Order DE92AQ-E112 and its first and second amendments.

13.10 Lumber Drying Kiln Number – The newest kiln was installed and permitted in 1998. At the time of the installation, there were four pre-existing kilns on site. The new kiln was designated “kiln #3” due to the location of installation. The four pre-existing kilns were located in pairs; one pair to the east near the outside lumber storage and the planer mill, and one pair to the west closer to the sawmill. Due to the available space, the new kiln was added to the eastern group. The two pre-existing kilns in the eastern group were designated kilns #1 and #2, with the new kiln designated kiln #3. The two kilns in the western group were designated kilns #4 and #5.

13.11 MRRR 7M and 8M of AOP – The correction for oxygen content as prescribed by 7M and 8M should be performed according to the method outlined in 40 CFR 60 Appendix A, Reference Method 19.

14.0 Appendix A – Clarkston Lumber Facility Maps, Site Layout, and Process Flow Diagrams

14.1 Area Map

- 14.2** Site Plan 1 – Emission Points
- 14.3** Site Plan 2 – Fork Lift Traffic
- 14.4** Site Plan 3 – Truck Traffic
- 14.5** Process Flow Diagram